

U.S. Patent Application Serial No. 10/760,999
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AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

1. (original): A method of performing an incision on a skin surface using a computer aided surgical navigation system, the system comprising: a sensor adapted to sense the position and orientation of at least one surgical reference associated with a structure to be referenced; and computer functionality adapted to receive information from the sensor about position and orientation of the surgical reference and generate information corresponding to the position and orientation of the structure to be referenced to which the surgical reference is associated, the method of guiding the surgical incision comprising:

(a) associating at least one first surgical reference with a portion of an individual's bony anatomy and skin proximate the bony anatomy;

(b) registering the position and orientation of the portion of the individual's bony anatomy and skin proximate the bony anatomy with the computer aided surgical navigation system such that the computer functionality can generate information corresponding to the position and orientation of the individual's bony anatomy and skin proximate the bony anatomy by receiving information from the sensor sensing the position and orientation of the first surgical reference;

(c) calculating a suggested incision path and length based upon the information generated by the computer functionality corresponding to the position and orientation of the individual's bony anatomy and skin proximate the bony anatomy;

(d) associating at least one second surgical reference with an incision device, wherein the incision device is a cutting device or a marking device;

(e) registering the position of the incision device with the computer aided surgical navigation system such that the computer functionality can generate information corresponding to the position of the incision device by receiving information from the sensor sensing the position and orientation of the second surgical reference; and

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(f) using the incision device in the performance of the incision, wherein the computer aided surgical navigation system provides guidance based on comparing the suggested incision path and length with the information corresponding to the position and orientation of the incision device as generated by the computer functionality by receiving information from the sensor sensing the position and orientation of the second surgical reference.

2 (original): The method of performing an incision on a skin surface using a computer aided surgical navigation system of Claim 1, wherein the computer aided surgical navigation system providing guidance further comprises a display associated with the computer aided surgical navigation system displaying the suggested incision path and length and the position of the incision device.

3 (original): The method of performing an incision on a skin surface using a computer aided surgical navigation system of Claim 2, wherein displaying the suggested incision path and length and the position of the incision device further comprises a semi-transparent display displaying the suggested incision path and length and the position of the of the incision device or a monitor displaying the suggested incision path and length and the position of the of the incision device.

4 (original): The method of performing an incision on a skin surface using a computer aided surgical navigation system of Claim 1, further comprising providing feedback if the incision device deviates from the suggested incision.

5 (previously presented): The method of performing an incision on a skin surface using a computer aided surgical navigation system of Claim 4, wherein providing feedback comprises providing a visible warning if the incision device deviates from the suggested incision.

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6 (previously presented): The method of performing an incision on a skin surface using a computer aided surgical navigation system of Claim 5, wherein providing a visible warning if the incision device deviates from the suggested incision comprises displaying a comparison of the suggested incision path and length with at least a portion of a path traveled by the incision device.

7 (previously presented): The method of performing an incision on a skin surface using a computer aided surgical navigation system of Claim 5, further comprising projecting an image of the suggested incision onto the individual; and wherein providing a visible warning if the incision device deviates from the suggested incision comprises altering the image if the incision device deviates from the suggested incision.

8 (previously presented): The method of performing an incision on a skin surface using a computer aided surgical navigation system of Claim 4, wherein providing feedback further comprises providing an audible warning if the incision device deviates from the suggested incision path.

9 (original): The method of performing an incision on a skin surface using a computer aided surgical navigation system of Claim 1, further comprising: using the incision to access the interior of the individual to install an orthopaedic implant; and installing the orthopaedic implant.

10-24. Cancelled.